Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

Central Regional Office • 8 New Bond Street, Worcester MA 01606 • 508-792-7650

August 24, 2017

Mr. John Branche
KT Acquisition LLC
DBA Komtek
40 Rockdale Street
Worcester, MA 01606

RE: Worcester
Transmittal No.: X271190
Application No.: CE-16-020
Class: SM-25
FMF No.: 420183
AIR QUALITY PLAN APPROVAL

Dear Mr. Branche:

The Massachusetts Department of Environmental Protection ("MassDEP"), Bureau of Air and Waste, has reviewed your Limited Plan Application ("Application") listed above. This Application concerns the operation of combustion and process equipment at your facility located at 40 Rockdale Street in Worcester, Massachusetts ("Facility").

This Application was submitted in accordance with 310 CMR 7.02 Plan Approval and Emission Limitations as contained in 310 CMR 7.00 "Air Pollution Control" regulations adopted by MassDEP pursuant to the authority granted by Massachusetts General Laws, Chapter 111, Section 142 A-O, Chapter 21C, Section 4 and 6, and Chapter 21E, Section 6. MassDEP's review of your Application has been limited to air pollution control regulation compliance and does not relieve you of the obligation to comply with any other regulatory requirements.

MassDEP has determined that the Application is administratively and technically complete and that the Application is in conformance with the Air Pollution Control regulations and current air pollution control engineering practice, and hereby grants this **Plan Approval** for said Application, as submitted, subject to the conditions listed below. This Plan Approval **supercedes** air quality Plan Approval CM-78-IF-012 issued on June 28, 1979 to Holbrook Drop Forge, Inc. and CM-75-IF-010 issued October 17, 1975 to Holbrook Drop Forge Company.

Please review the entire Plan Approval, as it stipulates the conditions with which the Facility owner/operator ("Permittee") must comply in order for the Facility to be operated in compliance with this Plan Approval.

1. DESCRIPTION OF FACILITY AND APPLICATION

KT Acquisition LLC (doing business as Komtek) manufactures ferrous (carbon alloys and stainless) and non-ferrous (aluminum, copper, nickel, chromium, titanium and other high - temperature metals) closed-die hot forged products primarily for the orthopedic, defense, aerospace, nuclear and petrochemical industries. Raw materials consist of billets or ingots that are cut to size, heated in fuel burning furnaces, shaped in forges, finished (grinded) and inspected prior to shipment. The forge dies are designed, manufactured and repaired at the Facility. The forges are lifted either by compressed air or electric motors.

The standard industrial codes (SIC) for this Facility are 3462 (iron and steel forgings) and 3463 (nonferrous forgings). The North American Industry Classification System (NAICS) codes for this Facility are 332111 (iron and steel forgings) and 332112 (nonferrous forgings). Although, this Facility may be subject to Nine Metal Fabrication and Finishing Area Source Categories 40 CFR Part 63 Subpart XXXXXX (6X) -National Emission Standards for Hazardous Air Pollutants. MassDEP has not taken delegation of these federal requirements and are not regulated by this Plan Approval.

History

Under the name of Holbrook Drop Forge Company, the Facility obtained an air quality Plan Approval (CM-75-IF-010) on October 17, 1975, that approved the construction of a new forge shop (Forge III) in addition to the existing forge shop. The new forge consisted of four (4) 1500 pound and one (1) 2500 pound board gravity drop hammers. On June 28, 1979, MassDEP issued a revised Plan Approval (CM-78-IF-012) reducing the number of slot furnaces from 6 to 4. Both of these Plan Approvals clearly indicated that noise was a concern and that additional noise attenuation was necessary. Plan Approval CM-78-IF-012 restricted operating hours in Forge III to limit the impact of noise to sensitive receptors.

On March 29, 1991, MassDEP executed an Administrative Consent Order, CE-OR-90-724 ("Order") with the Facility that stated that noise complaints had been received and verified by the Department. Excessive noise had resulted in a condition of air pollution despite restricting the hours of operation in Forge III.

The Administrative Consent Order remains in effect and includes the following actions to be taken:

1. All windows and access openings on the west side (Rockdale Street) shall remain closed during periods of operation after 5:00 pm.
2. There will no second shift in Forge I, Forge II or the Press room.

3. A noise barrier fence must be erected and a muffler installed on the compressor release serving Forge III.
4. Additional noise attenuation will be initiated if deemed necessary.
5. Komtek will continue to operate with the restrictions detailed in the Order.
6. Forge I, Forge II and the Press Room may operate between the hours of 7:00 am and 5:00 pm, Monday through Friday and on Saturdays between the hours of 7:00 am and 12:00 pm.
7. Forge III may operate between the hours of 7:00 am and 10:50 pm, Monday through Friday, and on Saturdays between the hours of 7:00 am and 12:00 pm. Between the hours of 5:00 pm and 10:50 pm, all doors, vents and access openings in Forge III will be closed. There will be no operations on Sundays.

The Department conducted a compliance inspection in 2012 that revealed that additional equipment had been installed without first obtaining an air quality Plan Approval in Plant 1 and Plant 2 located across Rockdale Street. Additional unapproved equipment that was observed included furnaces, Kolene salt bath, and a wax burning oven utilized in the casting operation. MassDEP issued Order ACO-CE-15-9001-27 on May 19, 2015. Compliance actions to be taken included:

1. Obtain a Plan Approval for the new equipment in Forge III and the Casting operation (Plant 2),
2. Accurately complete and submit source registration forms that reflected the additional equipment and
3. Modify a stack serving a Pangborn dust collector to meet good engineering practice. A stack serving the Pangborn dust collector now extends at least 10 feet above the roof and complies with the Order.

The Mold Making and Metal Casting area located across Rockdale Street located in Plant 2 was taken out of production in 2016. The Kolene salt bath process, the Lindberg wax burn off furnace processes, autoclave and casting operation are no longer conducted at this Facility. This Plan Approval will not address these processes.

Process Description in Plant 1

Forging is a manufacturing process for shaping metal parts. A heavy hammer is dropped repeatedly onto the metal in order to form it into the desired shape. Forging is often classified according to the temperature at which it is performed: cold forming, warm forging or hot forging. Komtek performs only hot forging. There are presently nine (9) forging hammers that are operational and three (3) other hammers that need repairs. Each forging hammer contains a die set with a cavity in the shape of the desired metal part. Some of the hammers are lifted by air

compression while others are lifted by electronic motors. The heavy hammers are then dropped repeatedly onto the metal blank to progressively reshape it. After several blows, the metal assumes the shape of the die cavity. In order to prevent the hot metal from sticking to the die, oil is occasionally swabbed onto the face of the die.

Some of the forging dies are manufactured at Komtek by Electric Discharge Machining (EDM). In this process, a graphite tool with the shape of the desired cavity "burn" its way into a steel block. An electric spark melts a small amount of the steel and moves it away in a process that is often called erosion, this process takes place under a stream of dielectric fluid. The liquid acts as a coolant to prevent heating of the block of steel and it also flushes away the eroded metal particles. The dielectric fluid is filtered and reused. The EDMs are vented outside. The shaped graphite tools for the EDM process are made at Komtek with a numerically controlled, milling machine. This operation is enclosed with a built-in air filtering system that is vented inside into the machine shop room.

A majority of the emissions from the Facility are associated with fuel combustion in the numerous furnaces. There are also fugitive emissions associated with the application of lubricating and cutting oils to the die containing graphite and silicates at the forges. Most of the oil drips into collection pits under the forges. Some of the oil evaporates to the interior of the forge rooms resulting in indoor smoke. None of the forges are directly vented to the ambient air. The forge rooms are vented by ceiling fans to the ambient air or in the case of Forge III, a 6 x 60 foot roof vent that ventilates the building. The welding machines that result in fine particulate matter are vented internally.

Direct stack emissions are associated with the fuel burning furnaces and the dust collector serving the two six foot shot blasters. There are several hand shot blasters that vent inside the facility.

Fuel Burning

Fuel combustion in the furnaces results in the emission of carbon monoxide (CO), particulate matter (PM), nitrogen oxides (NOx), volatile organic compounds (VOC) and sulfur oxides (SOx). The maximum energy input capacity for this fossil fuel utilization facility is greater than 10,000,000 Btu/hr. Komtek must therefore complete source registration forms pursuant to 310 CMR 7.12. The following emission units combust fuel: CRV-1,CRV-2, CRV-3, CRV-4, 1, 2, 3, 4, B301, B302, B303, B304, B310, B311, B312, B313, C203, Box F2, MB1, AC8, GUH, and space heaters.

Process

The Electrical Discharge Machines ("EDM") are cutting machines that are vented outside because the oil based dielectric fluids are combustible and presents a fire hazard.

Equipment List

Forge I is the oldest building within Plant 1. It contains:

- a 1500 pound coining hammer,
- three (3) oil fired slot furnaces (EU 1) vented inside the facility rated at 1.2 million Btu/hr each,
- one (1) natural gas fired Gehnrich Box Furnace (EU 2) vented outside and is rated at 0.1 million Btu/hr,
- 1-3500 pound drop forge hammer,
- 1-2500 pound drop forge hammer,
- 1-2000 pound hammer forge,
- 1-1500 pound Coining hammer, and
- Sunspan dust collector serving two (2) shot blasters. It is vented internally.

All of the furnaces in Forge I are vented internally. This building is vented to the ambient air by large ceiling fans.

Forge II is located within Plant 1 and contains:

- One (1) oil fired slot furnace (EU 3), and
- One (1) 300 ton extruder (EU 4) is located in this area and is vented outside. Lubricating oil containing graphite (10-20%) and silicates is used on this equipment that may result in particulate matter being emitted to the ambient air.

Forge III and Forge III extension are located within Plant 1 and contain:

- Four (4) Banning forge hammers in operation (EUs 1A, 1B, 2A, and 2B). They are two (2) - 2000 kilogram Programmable air assist hammers, and two (2) - 3150 kilogram Programmable air assist hammers. There is also one (1) -2000 pound drop forge and two (2) drop forge hammers (1500 pound and 2000 pound) in need of repair. None of the hammers are hooded or vented directly outside. They vent internally;
- Two (2) Board Hammers (EU BH-1 and BH-4). They vent internally;
- Nine (9) natural gas fired open slot furnaces each equipped with individual stacks and each rated at 1.2 million Btu/hr. (EUs B301, B302, B303, B304, B310, B311, B312, B313, and C203);

- One (1) Gehnrich Box Furnace is not equipped with a stack and is rated at 0.1 million Btu/hr (EU Box F2);
- Approximately 165 gallons per year of Die Lube is used;
- Approximately 110 gallons per year of Way Lube is used; and
- Electric resistance furnace.

There is a Gerb Akustil condenser on each of the Banning hammers that filters incoming air (assists in lifting the hammers) and then discharges the air externally via a stack equipped with a noise muffler.

Press Department (adjacent to Forge I) located within Plant 1 and contains:

- Hydraulic stamping presses and hand blasting. This equipment is not vented to the ambient air;
- Space heaters (EU GUH) emissions are included with all the natural gas burning equipment; and
- CRV-4 Co-Ray Vac Heater burns natural gas.

Mold Repair is located in Plant 1 and contains:

- Three (3) welders. Welding rod usage is tracked.

Maintenance Shop is located in Plant 1and contains:

- One (1) welder;
- One (1) weld natural gas furnace rated at 0.1 MMBtu/hr. It has no stack. (EU HTF-1). All welders use argon gas to minimize the formation of oxides. The facility tracks annual welding rod and wire usages. Welding equipment is controlled by a Torit equipped with particulate filters. It is vented back into the Facility;
- Hot water heater (included with all natural gas burning equipment throughout the Facility);
- Space heater (EU CRV-2) included with all natural gas burning equipment throughout the Facility; and
- Parts Cleaner (EU parts cleaner).

Shot cleaning ("Wheelabrator Room") contains:

- Two (2) Pangborn six cubic foot shot blasters and a Pangborn cartridge filter. This air pollution control device has a new stack as required by the 2012 Order (EU DC2). A compliance emissions test will be conducted on this dust collector utilizing EPA Method 5 for particulate matter and Method 29 for metals (see Table 3); and
- Space heater (EU CRV-3) emissions are included with all natural gas burning equipment throughout the Facility.

Non Destructive Testing contains:

Quality assurance and inspection of forged parts is done at stations using Sherwin fluorescent penetrant and Magnaflux dielectric fluids.

Machine Shop contains: Several pieces of metal working equipment for the manufacture of forge dies.

- Two (2) Electrical Discharge Machines (EU EDM) are used to cut graphite. The EDM equipment is vented externally to prevent a fire hazard. A 6-inch stack vents the EDMs through the roof because of the fire hazard associated with the combustible oil based dielectric fluids;
- Graphite cutting;
- Numerically controlled Milling (cutting) machine equipped with a cartridge filter that vents internally;
- Milling machines that cut under a stream of coolant that washes away metal chips
- Parts cleaner;
- Drill presses; and
- Grinders.

The following pieces of air pollution control equipment operate within Plant 1 and vent to the interior of the building:

1. A Donaldson Torit dust collector (model SDF-6) controls particulate from the Graphite Cutting operations located in the Machine Shop (CNC machine, Bridgeport Mill and the Band saw);
2. A Donaldson Torit cartridge dust collector (model SDF-6) controls particulate from 2 Pedestal Grinders, Belt Sander, Developer and a 12 inch Disk Grinder located in the Machine Shop; and

3. A Sunspan Systems (model SCC-9-20-22) cartridge dust collector controls particulate from a 6 cubic foot shot blaster and a 3 cubic foot blaster located in Forge I.

Best Available Control Technology (BACT) for the combustion equipment at this Facility includes following the manufacturer's design specifications for fuel burning equipment and good combustion practices for the slot and box furnaces located throughout the Facility. BACT for the vented shot blasting process is the proper operation of the dust collector to control particulate matter. Its emission limit is an outlet loading of 0.001 grains/standard cubic foot.

2. EMISSION UNIT (EU) IDENTIFICATION

Each Emission Unit (EU) identified in Table 1 is subject to and regulated by this Plan Approval:

Table 1

EU	Description	Design Capacity	Pollution Control Device
CRV-1 (Steel cutting area)	Co-Ray Vac Heater (natural gas)	0.04 MMBtu/hr	N/A
Forge I			N/A
1	Three (3) open slot furnaces (# 2 fuel oil)	3.6 MMBtu/hr total	
2	One (1) Gehnrich box furnace	0.1 MMBtu/hr	
Forge II			N/A
3	One (1) slot furnace serves 300 ton extruder (#2 fuel oil)	1.2 MMBtu/hr	
4	300 ton extruder		
Forge III			N/A
B301-B302	Two (2) slot furnaces (B301 and B302) associated with Banning Air Hammer1A	2.4 MMBtu/hr total	
B303-B304	Two (2) slot furnaces (B303 and B304) associated with Banning Air Hammer 2A	2.4 MMBtu/hr total	
B310-B311	Two (2) slot furnaces (B310 and B311) associated Banning Air Hammer 2B	2.4 MMBtu/hr total	
B312-B313	Two (2) slot furnaces (B312 and B313) associated Banning Air Hammer 1B	2.4 MMBtu/hr total	

Table 1

EU	Description	Design Capacity	Pollution Control Device
1A, 1B, 2A, 2B	Four (4) Banning Air Hammers (1A, 1B, 2A, 2B)	275 gpy of oils and lubricants (graphite 30%)	Forge III is equipped with an external sound deadening wall
BH-1 BH-4	2 Board Hammers		N/A
C203	One (1) slot furnace (Natural gas)	1.2 MMBtu/hr	N/A
Box F2	One (1) Gehnrich Box furnace (Natural gas)	0.1 MMBtu/hr	
Shot cleaning			
DC-2	Two (2) 6 cubic foot Pangborn Shot blasters using steel shot	2051 acfm average inlet each	Pangborn cartridge dust collector- 2100 acfm capacity (model 600 CN-Z-8420)
CRV-3	Co-Ray Vac Heater (natural gas)	0.145 MMBtu/hr	N/A
Press Dept.			N/A
CRV-4	Co-Ray Vac Heater (natural gas)	0.05 MMBtu/hr	
Maintenance			
HTF-1	Heat treat/Weld Furnace used for die repair	0.1 MMBtu/hr	
CRV-2	Co-Ray Vac Gas Heater	0.04 MMBtu/hr	N/A
Parts cleaner	Metal Parts Cleaners		
Machine shop			N/A
EDM	Two (2) EDM		
Heating Equipment			N/A
MB1	Weil McLain natural gas boiler	0.82 MMBtu/hr	
AC8	Reznor natural gas unit	0.225 MMBtu/hr	
GUH	Six (6) Natural Gas heaters	0.225 MMBtu/hr each 1.35 MMBtu/hr total	
Space heaters	26 space heaters	5.83 MMBtu/hr total	

Table 1 Key:

Acfm= actual cubic feet per minute

EDM = electro discharge machine
EU = emission unit
gpy = gallons per year
MMBtu/hr = million British Thermal Units per hour
N/A = not applicable
% = percent

3. APPLICABLE REQUIREMENTS

A. OPERATIONAL, PRODUCTION and EMISSION LIMITS

The Permittee is subject to, and shall not exceed the Operational, Production, and Emission Limits as contained in Table 2:

Table 2

EU	Operational / Production Limit	Air Contaminant	Emission Limit	
			Tons per Month except where noted	Tons per Year[1]
DC-2		PM10 (total)	0.25 TPM; 0.001 gr/dscf	1
Parts Cleaner	Less than 100 gallons per month of solvent consumption [2]	VOC	0.03	0.33
4, 1A, 1B, 2A, 2B, BH-1, and BH-2	400 gallons/yr oil lubricants, graphite containing lubricant and cutting oils	VOC [3]	0.14	1.7
2, B301, B302, B303, B304, B310, B311, B312, B313 C203, Box F2, CRV-1, CRV-2 CRV-3, CRV-4, HTF-1,MB1, AC8,GUH, and 26 space heaters	Natural Gas only [4]	NOx	0.3	1.6
		PM10 (total)	0.02	0.12
		CO	0.23	1.36
		VOC	0.02	0.09

Table 2				
EU	**Operational / Production Limit**	**Air Contaminant**	**Emission Limit**	
			Tons per Month except where noted	**Tons per Year[1]**
1, 3, C202 and Box F1	#2 Fuel Oil only [5]	NOx	0.024	0.14
		PM10 (filterable)	0.002	0.012
		CO	0.01	0.03
Facility Wide		HAP (single)	0.2	1.25
		HAP (total)	0.52	3.125
		PM10 (total)	0.19	1.13
		NOx	0.30	1.74
		CO	0.23	1.39
		VOC	0.35	2.12
		Opacity	$\leq$ 5%	

Table 2 Key:

EU = Emission Unit

CO = Carbon Monoxide

gr/dscf = grains per dry standard cubic foot

HAP = hazardous air pollutant

NA = not applicable

NO_x = Nitrogen Oxides

PM10 = Particulate Matter less than 10 microns in diameter.

PM total = Sum of the filterable PM and condensable PM.

TPM = tons per month

TPY = tons per year

VOC = Volatile Organic Compounds

$\leq$ = less than or equal to

% = percent

Table 2 Notes:

1. Tons per year means tons per consecutive12-month period
2. Pursuant to 310 CMR 7.03(8) – Consumption rate is the amount of solvent added into the unit less any documented solvent waste disposal or recycling amounts, each in gallons per month.
3. Assumption: all oil and lubricants were volatilized – this is a conservative case.

4. Emission limits based on a potential of 324, 000 therms (32.4 MM standard cubic feet) of natural gas per year.
5. Emission limits based on a potential of 12,000 gallons of fuel oil per year.

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to, and shall comply with, the monitoring, testing, record keeping, and reporting requirements as contained in Tables 3, 4, and 5:

Table 3

EU	Monitoring and Testing Requirements
Parts Cleaner	1. The Permittee shall monitor the solvents used in the parts cleaner. Solvent usages and emissions shall be tracked and quantified on a monthly basis.
DC-2	2. The Permittee shall ensure that the dust collector operates at a pressure drop between 3.1 and 5 inches of water gauge.
	3. The Permittee shall install and continually operate a visual alarm to alert the operator when the differential pressure is outside of the operational limits.
	4. The Permittee shall perform routine weekly inspections and maintenance on the dry air filters in accordance the manufacturers' recommendations.
	5. If there is an upset condition related to a dust collection device or an observation of visible emissions from a stack, the Permittee shall monitor the opacity from the affected stacks serving the dust collection device using USEPA Method 9 at least once per 24 hour period during daylight hours.
	6. The Permittee shall perform a black light test on the dust collection device on an annual basis.
	7. The Permittee shall conduct emission testing on the baghouse serving the Pangborn shot blasters within 90 days of the issuance date of this Plan Approval, or no later than November 22, 2017. The test shall utilize USEPA Reference Test Method 5/202 to verify compliance with the PM emission limits in Table 2. The Permittee shall also perform EPA Method 29 for determining lead, nickel, cobalt and cadmium emission levels (lbs/hr) in the stack exhaust.
Facility-wide	8. The Permittee shall monitor all operations to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	9. The Permittee shall monitor natural gas and fuel oil usages on a monthly and 12 month total basis.
	10. The Permittee shall monitor the quantities of all lubricants, die releases and oils used in the forges and the extruder on a monthly and rolling 12 month total basis.
	11. If and when MassDEP requires it, the Permittee shall conduct emission testing in accordance with USEPA Reference Test Methods and Regulation 310 CMR 7.13.

Table 3	
EU	**Monitoring and Testing Requirements**
Facility-wide	12. The Permittee shall submit to MassDEP for approval a stack emission pretest protocol, at least 30 days prior to emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.
	13. The Permittee shall submit to MassDEP a final stack emission test results report, within 45 days after emission testing, for emission testing as defined in Table 3 Monitoring and Testing Requirements.
	14. The Permittee shall ensure that equipment or emission monitoring systems installed for the purpose of documenting compliance with this Plan Approval shall be installed, calibrated, maintained and operated by the Permittee in sufficient manner to ensure continuous and accurate operations at all times.

Table 3 Key:

EU = Emission Unit

USEPA = United States Environmental Protection Agency

Table 4	
EU	**Record Keeping Requirements**
1, 2, 3, B301, B302, B310, B311, B312, B313, C203, Box F2, CRV1, CRV2, CRV3, CRV4, MB1, AC8, GUH, and space heaters	1. The Permittee shall maintain monthly and annual natural gas and fuel oil usage records on site.
	2. The Permittee shall maintain a copy of all of the manufacturers' recommendations for the operation and good combustion practices for the furnaces and heaters on site in a location readily accessible to furnace operators.
DC-2	3. The Permittee shall record the pressure drop reading from the magnehelic once per day on a log readily available to the operator and to the DEP and EPA when requested. The log shall be dated and initialed by the operator performing the reading.

Table 4	
EU	**Record Keeping Requirements**
DC-2	4. The Permittee shall maintain records of routine inspections and maintenance performed on the dust collector. At a minimum, the records must document the pressure drop across the collection device observed quarterly, the type of inspection and/or maintenance performed, such as daily hopper unloading , the date completed, and any actions taken. The records shall be dated and initialed by the operator.
	5. The Permittee shall maintain the results of each black light test performed on the Pangborn dust collector annually.
	6. The Permittee shall maintain a record of all malfunctions of the dust collector and shall include the date and time of the malfunction, corrective actions taken, and the date and time the dust collector returned to normal operation. These records shall be maintained at or near each of the individual collection devices.
	7. The Permittee shall maintain a record of all Method 9 opacity reading results, annual black light tests and compliance tests conducted on the dust collector.
	8. The Permittee shall maintain an updated standard operating procedure (SOP) for the dust collector which defines the procedures and time lines required to address malfunctions on the dust and collector.
Parts Cleaner	9. The Permittee shall maintain a record keeping system to track information necessary to quantify monthly and annual VOC solvent usages and emissions from the parts cleaner. Each monthly total emission shall be incorporated into a 12 month rolling total and recorded.
4, 1A, 1B, 2A, 2B , BH-1, and BH-2	10. The Permittee shall maintain a record keeping system to track types and quantities of lubricants, and cutting oils used in the forges, furnaces, and extruder.
Facility Wide	11. The Permittee shall maintain adequate records on-site to demonstrate compliance with all operational, production, and emission limits contained in Table 2 above. Records shall also include the actual emissions of air contaminant(s) emitted for each calendar month and for each consecutive twelve-month period (current month plus prior eleven months). These records shall be compiled no later than the 15th day following each month. An electronic version of the MassDEP approved record keeping form, in Microsoft Excel format, can be downloaded at http://www.mass.gov/eea/agencies/massdep/air/approvals/limited-emissions-record-keeping-and-reporting.html#WorkbookforReportingOn-SiteRecordKeeping.
	12. The Permittee shall maintain records of the types and quantities of any VOC and / or HAP containing formulations used in the Facility in the form of Safety Data Sheets (SDS) or manufacturer's specification data.
	13. The Permittee shall maintain records on-site of the quantities of all oils and lubricants used in the Facility. All efforts shall be made to quantify the oils that are aerosolizing into the forge rooms. This may be calculated by subtracting the quantity of oils that drip into the forge pits from the quantity of oils used and tracked on an annual and monthly basis. Hazardous waste shipment records may be used to verify the amount of oil that drip into the pits.

Table 4	
EU	**Record Keeping Requirements**
Facility Wide	14. The Permittee shall maintain records of monitoring and testing as required by Table 3.
	15. The Permittee shall maintain a copy of this Plan Approval, underlying Application and the most up-to-date SOMP for the EU(s) and pollution control devices (PCD) approved herein on-site.
	16. The Permittee shall maintain a record of routine maintenance activities performed on the approved EU(s), PCD(s) and monitoring equipment. The records shall include, at a minimum, the type or a description of the maintenance performed and the date and time the work was completed.
	17. The Permittee shall maintain a record of all malfunctions affecting air contaminant emission rates on the approved EU(s) and PCDs. At a minimum, the records shall include: date and time the malfunction occurred; description of the malfunction; corrective actions taken; the date and time corrective actions were initiated and completed; and the date and time emission rates returned to compliant operation.
	18. The Permittee shall maintain records to ensure sufficient information is available to comply with 310 CMR 7.12 Source Registration.
	19. The Permittee shall maintain records required by this Plan Approval on-site for a minimum of five (5) years.
	20. The Permittee shall make records required by this Plan Approval available to MassDEP and USEPA personnel upon request.
	21. The Permittee shall track and record the hours of operation of the Forge 1, Forge II, Forge III and the Press Room to ensure that the Facility is in compliance with the operating hour restriction identified in this Plan Approval.

Table 4 Key:

EU = Emission Unit

PCD = Pollution Control Device

SOMP = Standard Operating and Maintenance Procedure

USEPA = United States Environmental Protection Agency

Table 5	
EU	**Reporting Requirements**
DC-2	1. The Permittee shall submit a pretest protocol to the MassDEP for approval for the emission testing of the baghouse serving the two (2) shot blasters within 30 days of this Plan Approval.

Table 5	
EU	**Reporting Requirements**
DC-2	2. The Permittee shall submit the compliance test results for the emission testing of the baghouse serving the two (2) shot blaster to the MassDEP within 45 days of the conducting the compliance test.
Facility Wide	3. The Permittee shall submit to MassDEP all information required by this Plan Approval over the signature of a "Responsible Official" as defined in 310 CMR 7.00 and shall include the Certification statement as provided in 310 CMR 7.01(2)(c).
	4. The Permittee shall notify the Central Regional Office of MassDEP, BAW Permit Chief by telephone: 508-767-2845, email: roseanna.stanley@ massmail.state.ma.us and CERO.Air@massmail.state.ma.us, or fax : 508-792-7621, as soon as possible, but no later than three (3) business day after discovery of an exceedance(s) of Table 2 requirements. A written report shall be submitted to the Permit Chief at MassDEP within ten (10) business days thereafter and shall include: identification of exceedance(s), duration of exceedance(s), reason for the exceedance(s), corrective actions taken, and action plan to prevent future exceedance(s).
	5. Pursuant to 7.12(1)(a)7., the Permittee is required to file Source Registration as a condition of this Plan Approval once every three years.

Table 5 Key:

EU = Emission Unit

4. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to, and shall comply with, the following special terms and conditions:

A. The Permittee is subject to and shall comply with the Special Terms and Conditions as contained in Table 6:

Table 6	
EU	**Special Terms and Conditions**
DC-2	1. The Permittee shall calibrate, maintain and continuously operate a pressure drop monitor for the dust collection device serving the two (2) 6 cubic foot shot blasters.
Forge 1, Forge II, and Press Room	2. The Permittee shall only operate Forge I, Forge II and the Press Room between the hours of 7:00 am and 5:00 pm, Monday through Friday and on Saturdays between the hours of 7:00 am and 12:00 pm.
	3. The Permittee shall not operate a second shift in Forge I, Forge II or the Press Room.
	4. The Permittee shall not operate Forge I, Forge II or the Press Room on Sundays

Table 6	
EU	**Special Terms and Conditions**
Forge III	5. The Permittee shall only operate Forge III between the hours of 7:00 am and 10:50 pm, Monday through Friday, and on Saturdays between the hours of 7:00 am and 12:00 pm.
	6. The Permittee shall close all doors, vents and access openings in Forge III between the hours of 5:00 pm and 10:50 pm.
	7. The Permittee shall not operate Forge III on Sundays.
	8. The Permittee shall maintain a noise barrier fence and the muffler installed on the compressor release serving Forge III.
Facility Wide	9. The Permittee shall close and keep closed all windows and access openings on the west side (Rockdale Street) during periods of operation after 5:00 pm.
	10. The Permittee shall maintain all noise deadening equipment according to the manufacturer's specifications
	11. The Permittee shall maintain and operate all dust collectors according to the manufacturer's specifications
	12. This Plan Approval, Tr X271190, supersedes Plan Approvals, Tr CM-75-IF-010 and Tr CM-78-IF-012, issued to the Permittee on October 17, 1975 and June 28, 1979, respectively in entirety, with the exception that all plan application materials submitted as part of the Plan Approval Tr CM-75-IF-010 and CM-78-IF-012 become part of this Plan Approval Tr X271190.

Table 6 Key:

EU = Emission Unit Tr -= Transmittal Number

B. The Permittee shall install and use an exhaust stack, as required in Table 7, on each of the Emission Units that is consistent with good air pollution control engineering practice and that discharges so as to not cause or contribute to a condition of air pollution. Each exhaust stack shall be configured to discharge the gases vertically and shall not be equipped with any part or device that restricts the vertical exhaust flow of the emitted gases, including but not limited to rain protection devices known as "shanty caps" and "egg beaters."

C. The Permittee shall install and utilize exhaust stacks with the following parameters, as contained in Table 7, for the Emission Units that are regulated by this Plan Approval:

Table 7				
EU	**Stack Height Above Ground (feet)**	**Stack Inside Exit Dimensions (inches)**	**Stack Gas Exit Velocity Range (feet per second)**	**Stack Gas Exit Temperature Range (°F)**
DC-2	38	16	35	75
B301	46	17	6-10	200
B302	46	17	6-10	200
B303	46	17	6-10	200
B304	46	17	6-10	200
B310	46	17	6-10	200
B311	46	17	6-10	200
B312	46	17	6-10	200
B312	46	17	6-10	200
C203	46	17	6-10	200
EDM (2 units to one stack)	24	6	20-25	Ambient
MB1	9	3	6-10	400

Table 7 Key:

EU = Emission Unit

°F = Degree Fahrenheit

5. GENERAL CONDITIONS

The Permittee is subject to, and shall comply with, the following general conditions:

A. Pursuant to 310 CMR 7.01, 7.02, 7.09 and 7.10, should any nuisance condition(s), including but not limited to smoke, dust, odor or noise, occur as the result of the operation of the Facility, then the Permittee shall immediately take appropriate steps including shutdown, if necessary, to abate said nuisance condition(s).

B. If asbestos remediation/removal will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that all

removal/remediation of asbestos shall be done in accordance with 310 CMR 7.15 in its entirety and 310 CMR 4.00.

C. If construction or demolition of an industrial, commercial or institutional building will occur as a result of the approved construction, reconstruction, or alteration of this Facility, the Permittee shall ensure that said construction or demolition shall be done in accordance with 310 CMR 7.09(2) and 310 CMR 4.00.

D. Pursuant to 310 CMR 7.01(2)(b) and 7.02(7)(b), the Permittee shall allow MassDEP and / or USEPA personnel access to the Facility, buildings, and all pertinent records for the purpose of making inspections and surveys, collecting samples, obtaining data, and reviewing records.

E. This Plan Approval does not negate the responsibility of the Permittee to comply with any other applicable Federal, State, or local laws or regulations now or in the future.

F. The Application is incorporated into this Plan Approval by reference. Should there be any differences between the Application and this Plan Approval, the Plan Approval shall govern.

G. Pursuant to 310 CMR 7.02(3)(k), MassDEP may revoke this Plan Approval if the construction work is not commenced within two years from the date of issuance of this Plan Approval, or if the construction work is suspended for one year or more.

H. This Plan Approval may be suspended, modified, or revoked by MassDEP if MassDEP determines that any condition or part of this Plan Approval is being violated.

I. This Plan Approval may be modified or amended when in the opinion of MassDEP such is necessary or appropriate to clarify the Plan Approval conditions or after consideration of a written request by the Permittee to amend the Plan Approval conditions.

J. Pursuant to 310 CMR 7.01(3) and 7.02(3)(f), the Permittee shall comply with all conditions contained in this Plan Approval. Should there be any differences between provisions contained in the General Conditions and provisions contained elsewhere in the Plan Approval, the latter shall govern.

6. MASSACHUSETTS ENVIRONMENTAL POLICY ACT

MassDEP has determined that the filing of an Environmental Notification Form (ENF) with the Secretary of Energy & Environmental Affairs, for air quality control purposes, was not required prior to this action by MassDEP. Notwithstanding this determination, the Massachusetts Environmental Policy Act (MEPA) and 301 CMR 11.00, Section 11.04, provide certain "Fail-Safe Provisions," which allow the Secretary to require the filing of an ENF and/or an Environmental Impact Report (EIR) at a later time.

7. APPEAL PROCESS

This Plan Approval is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing. A request for a hearing must be made in writing and postmarked within twenty-one (21) days of the date of issuance of this Plan Approval.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts, which are the grounds for the request, and the relief sought. Additionally, the request must state why the Plan Approval is not consistent with applicable laws and regulations.

The hearing request along with a valid check payable to the Commonwealth of Massachusetts in the amount of one hundred dollars ($100.00) and a completed Adjudicatory Hearing Fee Transmittal Form, a copy of which is attached hereto, must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

This request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority.

MassDEP may waive the adjudicatory hearing-filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

Enclosed is a stamped approved copy of the application submittal.

Should you have any questions concerning this Plan Approval, please contact Maria L'Annunziata by telephone at 508.767.2748, or in writing at the letterhead address.

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

Roseanna E. Stanley
Permit Chief
Bureau of Air and Waste

Enclosures:

- Adjudicatory Hearing Fee Transmittal Form
- Stamped Plan Application

ecc: Worcester Inspectional Services
Worcester Fire Department
MassDEP/Boston - Yi Tian
Richard Lavengood